

AMALGAMATED WIRELESS VALVE CO. PTY. LTD., RYDALMERE

AWV AS128

GERMANIUM P-N-P ALLOY TRANSISTOR

For Large-Signal Audio-frequency Applications

Dimension Outline TO-1

MAXIMUM RATINGS ABSOLUTE.

Collector-to-base voltage.....	-32 volts
Collector-to-emitter voltage <sup>*</sup> .....	-32 volts
Emitter-to-base voltage.....	-10 volts
Collector current.....	1 amp
Base current.....	-20 mA
Transistor dissipation <sup>Δ</sup> .....	700 mW
Junction temperature .....	90 °C
Storage temperature:	
Minimum.....	-55 °C
Maximum.....	90 °C

THERMAL RESISTANCE

From junction to free air.....	0.3 °C/mW
From junction to free air with flag-type heat fin.....	0.15 °C/mW
From junction to free air with flag-type heat fin & 2 sq.in. heat sink.....	0.09 °C/mW
From junction to case.....	0.05 °C/mW

\* See also collector-to-emitter voltage versus  
base-to-emitter impedance characteristic.

Δ Fitted with flagtype heat fin and 2 sq.in. heat  
sink in free air at 25°C.

ELECTRICAL CHARACTERISTICS.

Voltage values are given with respect to base, and  
at an ambient temperature of 25°C, unless otherwise stated.

Min. Typical Max.

Collector leakage current with dc collector volts = -10 and emitter current zero.....	-	-	10	μA
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<u>ELECTRICAL CHARACTERISTICS (Cont'd)</u>	<u>Min.</u>	<u>Typical</u>	<u>Max.</u>	
Collector voltage with dc collector current = -200 $\mu$ A, emitter current zero.....	32	-	-	volts
Emitter voltage with dc emitter current = -200 $\mu$ A, collector current zero	10	-	-	volts
DC collector-to-emitter saturation voltage with dc collector current = -500 mA and dc base current = -50 mA.....	-	-	1.5	volt
Base-to-emitter forward voltage with dc collector-to-base volts = -1: with dc emitter current = 50 mA	-	-	-0.3	volt
with dc emitter current = 300 mA	-	-	-0.45	volt
Emitter current with dc emitter volts = -5, dc collector current zero, junction temperature = 75°C.....	-	-	500	$\mu$ A
DC current gain: With dc emitter current = -50 mA, dc collector volts = -1.....	55	90	175	
With dc emitter current = -300 mA, dc collector volts = -1.....	60	90	175	
Gain-bandwidth product with dc collector volts = -2, dc emitter current = -10 mA.....	1.0	1.5	-	M Hz
Common-emitter alpha cutoff frequency with dc collector volts = -2, dc emitter current = -10 mA.....	10	15	-	K Hz
Extrinsic base resistance with dc collector volts = -5, dc emitter current = -1 mA.....	-	25	-	ohms
Collector capacitance with dc collector volts = -5, dc emitter current zero.....	-	100	-	pF